

CLAIMS

1. A waterproof seam formed between two pieces of a fabric, at least one of the pieces being a laminate;
 - the laminate comprising a first layer comprising a waterproof water-vapour-permeable layer, and a second knitted or woven layer laminated to the first layer and comprising a first component and a second component, the first component being stable to a first temperature and the second component melting at a second temperature lower than the first temperature; and
 - the seam comprising a thermoplastic seam seal tape in contact with the second layer of the at least one piece of laminate, and sealing the seam.
2. A seam according to claim 1, wherein the second knitted or woven layer is a bulky material.
3. A seam according to any preceding claim wherein the second component is meltable at a temperature in the range 80°C to 170°C.
4. A seam according to any preceding claim wherein the first component is stable to a temperature of at least 140°C.

5. A seam according to any preceding claim wherein the difference between the melting temperature of the first and second components is at least 20°C.
6. A seam according to any preceding claim wherein the second layer is composed of a plurality of yarns, each yarn being formed of strands, filaments, threads or fibres having interstices between.
7. A seam according to any preceding claim wherein the first component is nylon 6,6 and the second component is polypropylene.
8. A seam according to any preceding claim wherein the second layer is composed of composite fibres, each fibre comprising the first component and the second component.
9. A seam according to any of claims 1-7 wherein the second layer is composed of first component fibres and second component fibres co-mingled together.
10. A seam according to any preceding claim wherein the thermoplastic seam seal tape comprises a backing having a layer of hot melt adhesive thereon.
11. A seam according to any preceding claim wherein the seam seal tape has a melting point above the melting point of the second component and below the melting point of the first component.

12. A seam according to claim 10 wherein the melting point of the seam seal tape is 10 to 20°C lower than that of the first component.
13. A seam according to any preceding claim wherein the second layer comprises more than two components each having a different melting point.
14. A seam according to any preceding claim wherein the waterproof water-vapour-permeable layer comprises a monolithic sheet of water-vapour-permeable polymer.
15. A seam according to any of claims 1 to 13 wherein the waterproof water-vapour-permeable layer comprises a coating of water-vapour-permeable polymer on a flexible substrate.
16. A seam according to any of claims 1 to 13 wherein the water-vapour-permeable layer comprises expanded polytetrafluoroethylene.
17. A seam according to any of claims 1 to 13 wherein the water-vapour-permeable layer comprises expanded polytetrafluoroethylene coated with a water-vapour-permeable polymer.

18. A seam according to any preceding claim which is resistant to the passage of vapours of NH_3 , HCl , H_2S , SO_2 or organic substances.
19. A seam according to any preceding claim formed of one piece of fabric and one piece of laminate.
20. A seam according to claim 19 wherein the fabric is the margin of a zip fastener.
21. A seam according to any of claims 1-18 formed of two pieces of laminate.
22. A seam according to any preceding claim, the tape overlying the seam and having been fused to the two fabric pieces on either side of the seam in contact with the second layer(s) thereof.
23. A seam according to any of claims 1-21, the tape being interposed between the two pieces of fabric in contact with the second layer(s) thereof and fused thereto.
24. A garment having a seam according to any preceding claim.
25. A shelter, cover, bivouac bag or tent having a seam according to any preceding claim.